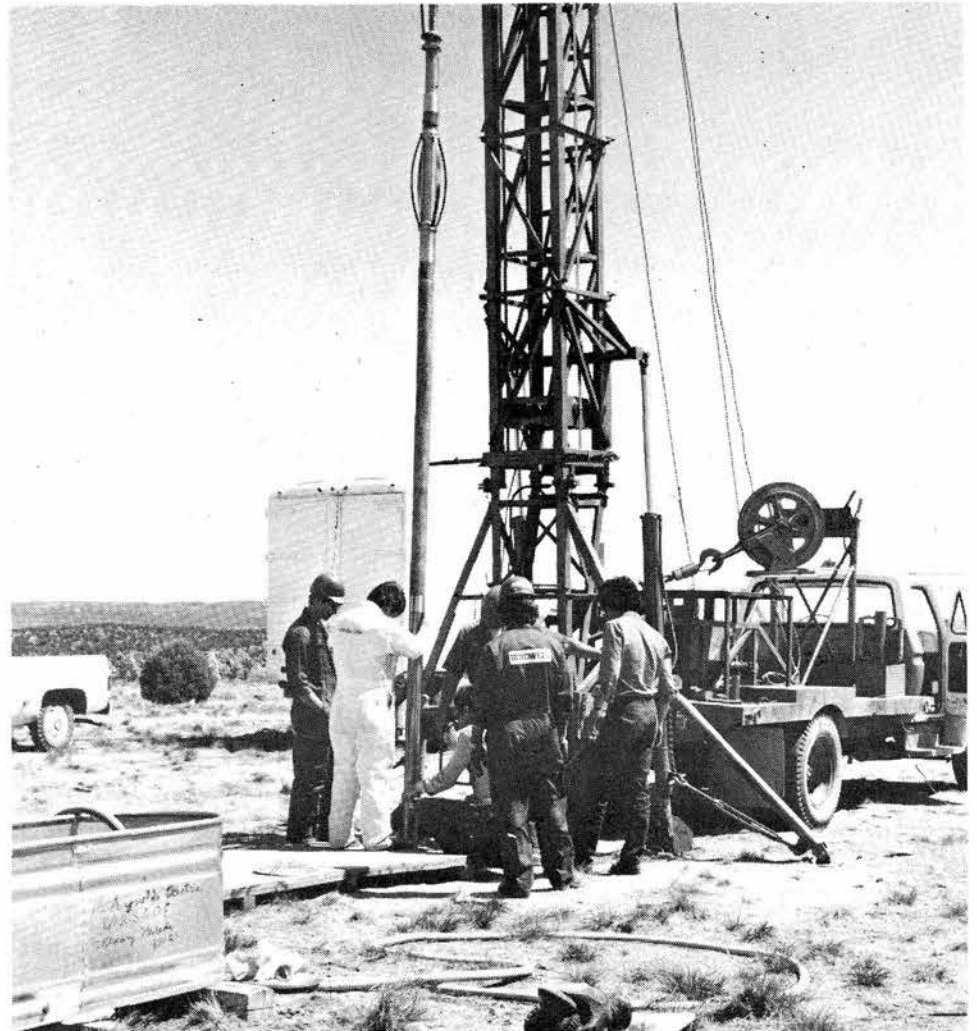


WINS DEVELOPERS Stew Kohler, who headed the project team that developed this downhole logging probe, and (right) Ralph Wardlaw, who was responsible for the surface computer and its software that turned signals from the probe into a precise log of hole angle. In photo at right, a WINS probe heads downhole during an NTS field test that indicated that WINS could log a borehole more accurately and more quickly than conventional logging system. WINS may find commercial markets in the future.



Weapon Spinoff

WINS is Winner Downhole

An experimental wellbore inertial navigation system (WINS) that logs the paths of directional holes much faster and more accurately than conventional surveying systems has completed a successful field test.

A repackaged version of an airborne inertial measurement unit developed by Mike Heck's Guidance and Control Division I 2334, the WINS downhole probe is 20 feet long and four inches in diameter; it contains two gyroscopes, three accelerometers, electronics, and a four-hour battery.

As the probe descends a well, gyroscope and accelerometer outputs are transmitted via electrical cable to a computer on the surface that calculates probe position 16 times a second and produces a log that

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charts the hole's path in three dimensions. The computer and its software were developed by Ron Andreas' Exploratory Systems Division II 1622. Ralph Wardlaw played the key role in this development.

"Based on early tests, we expect to achieve a surveying accuracy of one foot per thousand feet of well depth," says WINS project leader Stew Kohler (2334). "That's about 10 times better than commercially available surveying systems. It also can survey a 10,000-foot well in about one hour, approximately five times faster than conventional systems."

A detailed wellbore survey is especially

useful when several wells are drilled from a single offshore platform. Accurate knowledge of borehole paths allows proper spacing and assures that target formations are reached. Such surveys also permit quick, accurate sinking of relief wells in the event of a deep, high-pressure oil/gas well blowout.

Key to the system's superior accuracy and rapid operation is Kalman filtering, a sophisticated error-reducing procedure used extensively in airborne navigation and adapted by Division 1622 for this unique

[Continued on Page Four]

ECP Agency Fairs Run Sept. 27, 29, Oct. 1

With strolling mariachis, radio and television personalities, Albuquerque's mayor, and Sandia's president on hand for the occasion, the first of three ECP (Employees Contribution Plan) Agency Fairs opens Monday, Sept. 27, under a tethered hot-air balloon west of Bldg. 800.

Representatives of 16 ECP agencies will man booths and offer literature, information, medical screening (for diabetes, scoliosis, oral cancer, high blood pressure), and demonstrations ranging from tortilla-making (Martineztown House of Neighborly Service) to jazzercise (YWCA).

Sandians are urged to stop by, enjoy the entertainment, and talk with the agency

representatives to learn of the vital welfare and human services performed by the agencies in the community.

At Monday's Fair, Larry Ahrens of KOB-AM as master of ceremonies will interview Mayor Harry Kinney and President George Dacey on United Way needs. Gary Doll and Carla Aragon of *PM Magazine* will film the Fair action for televising later. El Mariachi Nuevo Tapatio will entertain.

On Wednesday, Sept. 29, the ECP Fair moves to the Sandia cafeteria patio with repeats of the agency participation and demonstrations. Mike Langner of KHFM will interview Glen Kepler (1810), Sandia's

ECP chairman. The Chamber Orchestra of Albuquerque will perform.

On Friday, Oct. 1, the Fair location is outside Gate 10 near Bldg. 821. Henry Tafoya of KOAT-TV will interview former Sandia President Morgan Sparks, chairman of the Albuquerque United Way. The Eldorado High School Strolling Strings will entertain. The time for all three fairs is the same—11:30 until 1 p.m.

The three ECP Agency Fairs are a prelude to Sandia's annual ECP drive scheduled this year Oct. 4-8. ECP supports the 38 agencies of the Albuquerque United Way and nine other national health agencies.

Antojitos

Muckraking Journalism Again--"So it's agreed, C.B. You'll form a task force with J.L. and G.Q. and get with B.R. over at Consolidated, and we'll make Toasty Toes a household necessity." That's the version of board room dialogue we find only on second-rate situation comedies. That's sure not the way we talk at Sandia. Or is it? A thumb-through of the organizational listings in our phone directory shows that most (14) of our directorates list themselves by last name and initials only (except, of course, for secretaries). Another 10 directorates are a mix of initials and given names. Only nine (mostly in the 1000 and 9000 vice-presidencies) list every employee's name in full. So what's the issue? Just this. It's a damned pain to have to flip from the organizational to the alpha listings to learn the first name of the person you want to talk with or write to. The fact that Sandia is a major national R&D lab doesn't prevent us from dropping completely all "Doctor" (for PhD) titles. It shouldn't keep us locked in the tradition of initials-only listings either. Let's drop them except, of course, for that handful of employees (T. A. Allen, for example) who prefer to be addressed by initials only. This goes for Small Staff as well--ever tried to learn from the phone book whether Mr. Fowler (9000) spells his name with one n or two?

•BH

Bureaucratic Insight--Reform always comes from below. No one with four aces asks for a new deal.

Colloquium

Update on the Shroud of Turin

Robert Dinegar of Los Alamos recently presented a colloquium entitled "The 1978 Scientific Study of the Shroud of Turin." As is generally known, the shroud is a cloth 4.35 meters long and 1.10 meters wide on which appears the image of a man who appears to have been crucified, scourged, beaten, and capped with thorns. Many people believe it is the burial shroud of Jesus.

The shroud's existence is documented only from the 14th century when it was being displayed as a religious relic in a church in Chambéry, France. The House of Savoy then acquired the shroud and has since kept it in the Cathedral of Torino (Turin) and displayed it to the public only on special occasions.

Dinegar is a member of the volunteer scientific team that traveled to Turin in 1978 to conduct a number of scientific tests on the shroud. At the colloquium he presented the findings only from his own

tests on the areas that are purportedly blood stains.

"Although the blood stain data can say nothing definitive about the origin of the shroud," Dinegar said, "the twelve tests for blood we carried out were all positive. They confirmed the presence of whole blood on the shroud."

"The evidence indicates that it's improbable that pigmented material was applied to the cloth—in other words, we found no evidence that the image was painted on."

Dinegar said that the team is still waiting for permission to perform carbon 14 dating on a small portion of the shroud. Although confident that the authorization from the Church is forthcoming, he added that "there are groups who do not want us to measure the threads in the shroud because they're afraid the results will show a 14th-century origin. Others feel that the dating isn't necessary because they're convinced the relic is authentic."

Dinegar paid special tribute to Bill Mottern (9262) who accompanied the scientific team to Turin and carried out nondestructive tests including infrared and X-ray fluorescence photography (LAB NEWS, Dec. 22, 1978).

Dinegar also praised Sandia for having "civilized colloquia"; Los Alamos schedules its colloquia at "0810"—an "ungodly hour."

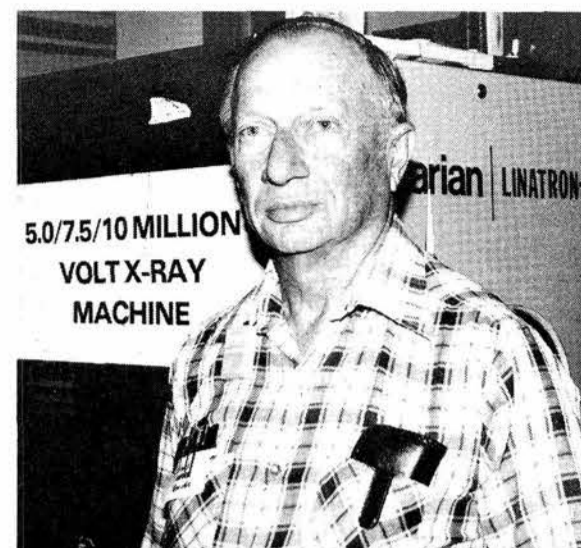
Congratulations

Bill (2121) and Sharon Burnett, a daughter, Erin Leigh, Aug. 29.

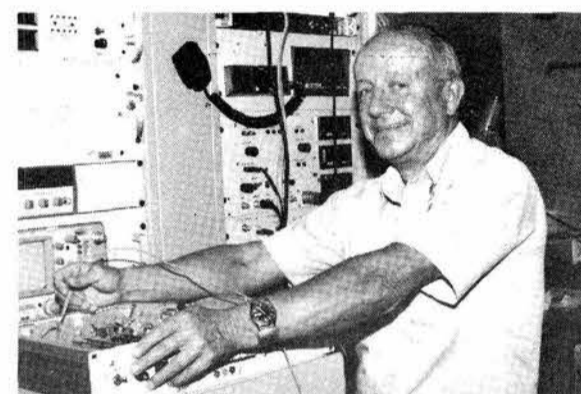
Andy (1813) and Holly (formerly 2513) Krainik, a daughter, Sally Elizabeth, Sept. 2.

Mark (2551) and Rachel Iverson, a son, Benjamin Charles, Sept. 8.

Retiring



Norman Richardson (7551)



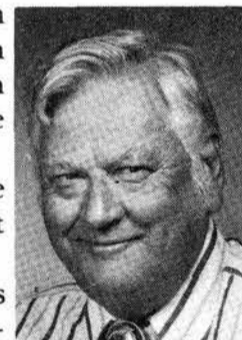
David Mayhew (7171)

Deaths

Leonard Nelson of Process/Fabrication Labs Support Division 7485 died Sept. 12. He was 61.

He had worked at the Labs since August 1951.

Survivors include his widow and four step-children.



* * *

James Langenhorst, a technical staff assistant in Division 9334, died suddenly Aug. 27. He was 46.

He had worked for the Labs since April 1960.

Survivors include his widow, three sons, and two daughters.



* * *

Leroy Torkelson of Solar Research and Evaluation Division 9721 died Sept. 4 in an automobile accident. He was 40.

He had worked at the Labs since June 1964.

Survivors include his widow and a son.



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Association of Business Communicators

Retiring



Bob Coates (8412)

Take Note

Matt Connors (8214) successfully completed the Certified Records Managers examination and has been accepted as a member of the Institute of Certified Records Managers, based in Washington, D.C. His certification was effective Aug. 2.

* * *

Bill Ormond (8261) has been promoted to the rank of colonel in the Army Reserve. Bill served five years in active duty as a paratrooper and has been in the Reserve for 21 years. His specialties are nuclear and chemical weapons and counter-insurgent operations.

Congratulations

Dona Crawford (8332) and Bob Dibble (8523), a son, Joshua Robert, Aug. 16.

Celeste and Clyde Layne (8511), a son, Colin LaLonde, Aug. 20.

Death

John Anderson, 52, of Systems Evaluation Division 8452, died Aug. 27 from injuries suffered six days earlier when a large tree fell on him while he was cutting wood near Arnold, Calif.



A former supervisor in the Acceptance Equipment Division, he had worked at Sandia for 25 years.

Survivors include his widow, two daughters, his mother, and two brothers.



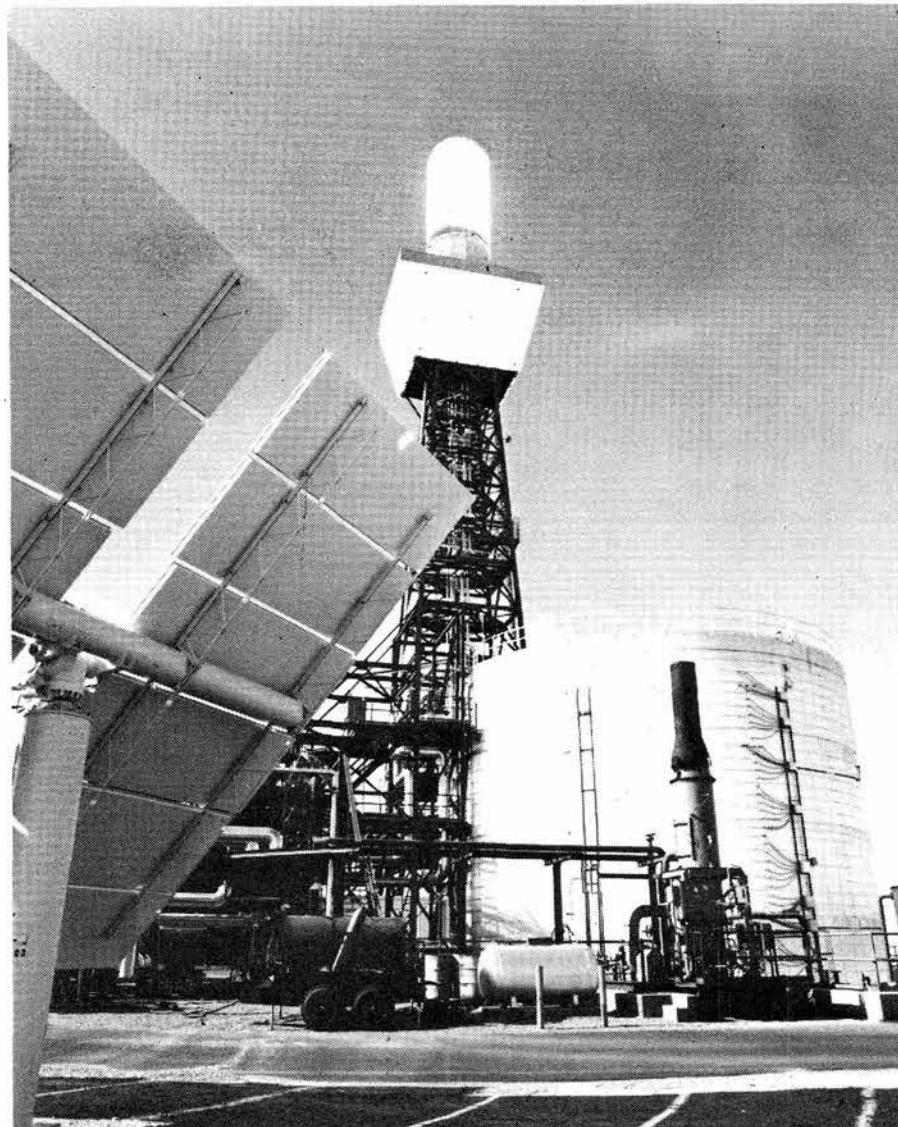
NOW HERE'S A REAL KNEE-SLAPPER . . . A new theory of the creation of humor, the theory of tragicomic reconciliation . . . holds that the humoristic product is the result of a creative transformation which consists initially in implicitly or explicitly opposing the tragic and comic poles of a given phenomenon, then subsequently in reconciling these two poles in a humoristic synthesis which triggers laughter. In most cases, the tragicomic reconciliation is concretized in the punchline.

—Waleed A Salameh, psychotherapist at Patton State Hospital, California, in a deadpan talk on stand-up comedians at the 89th annual meeting of the American Psychological Association, as quoted in *Psychology Today*.



SANDIA LIVERMORE NEWS

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FOR THE FIRST TIME, electrical power has been generated by steam produced with heat stored in the tank (lower right). Thermal storage system gives Solar One the capability to generate power during cloudy periods and a few hours after sunset.

Power Generated by Storage Steam

Another milestone was reached at the Solar One central receiver pilot plant near Barstow on Aug. 24 when turbine roll was achieved from storage steam. It is the first time the plant was synchronized to the power distribution grid using steam generated from the thermal storage system, according to Al Skinrod, supervisor of Systems Evaluation Division 8452.

Last April 12 the solar power facility produced its first net electrical output when the 80-acre field of some 1818 heliostats focused on the 310-foot central receiver tower, boiling its water and producing steam which turned the turbine, thus producing electricity that went to Southern California Edison's grid.

The latest step in generating electricity is part of a two-year test and evaluation phase under the technical management of Sandia scientists at the site. Al reports that the steam conditions were 213 psi, 507°F, and the flow was 63,000 pounds per hour. Peak electrical power generated was 4.9 megawatts.

Thermal storage is expected to produce some seven megawatts when it is at full capacity. The steel storage tank is 60 feet in diameter and 45 feet tall, giving it a volume of 149,000 cubic feet. It contains 4500 tons of crushed granite, 2200 tons of

sand, and 239,600 gallons of Caloria HT-43 oil, a petroleum oil about the consistency of cold mineral oil.

This storage system gives the Solar One pilot plant the flexibility to produce electricity during cloudy periods and for a few hours following sunset. The oil is taken from the bottom of the tank and heated with the heat exchanger with steam from the solar central receiver, then pumped back into the top of the tank. As it flows through the rock and sand bed, it heats the interior to temperatures of 435°F to 580°F. To reclaim the heat from the tank the oil is withdrawn and passed through a heat exchanger to produce steam that turns the turbine.

Al says many other facets of the evaluation and testing are under way at this time as well. "All the manual modes will be checked out next summer. Then we'll incorporate additional automatic controls, allowing Edison to operate the plant with a minimum number of people on site."

Even though the plant is still in the checkout and test period during the week, Edison runs the plant and produces commercial power on weekends. More than 550 megawatt hours have been delivered to the grid since initial turbine roll last April.



SOLAR FURNACE at the Central Solar Receiver Facility was the site of Tim Long's summer program under a fellowship from Associated Western Universities. Tim, a graduate student in mechanical engineering at NMSU, conducted a series of experiments on the chemical interaction of carbon (in the form of a fluidized bed of particles) and steam. It's a preliminary study in biomass research, the object of which is to produce a gaseous fuel out of a carbonaceous material in a solar-heated furnace. Early analyses indicate that a synthetic gas with BTU values higher than in the original carbon was achieved.



TECHNOLOGY TRANSFERRING—A conceptual version of the wellbore inertial navigation system (WINS) was presented to over 30 representatives of geotechnology companies recently. The meeting allowed people in the private sector from throughout the country and from France to discuss the steps necessary before commercialization of the device with the Sandia developers. Here, James Kelsey (9741) explains one of the downhole components that is part of the well-logging system.

Continued from Page One

WINS Is Winner

underground application. Kalman filtering, in essence, is a computational algorithm that takes into account inertial navigation error dynamics to regularly correct calculated positions.

Periodically during a survey, the probe stops for approximately ten seconds so filtering can be conducted. At this time, any indicated velocity is a known error that is inserted into the filter to correct errors in probe position.

Many conventional, high-quality well surveying systems include accelerometers and gyroscopes (or magnetometers); however, they measure only the attitude—angular orientation—of the descending probe, and have no means for position error correction.

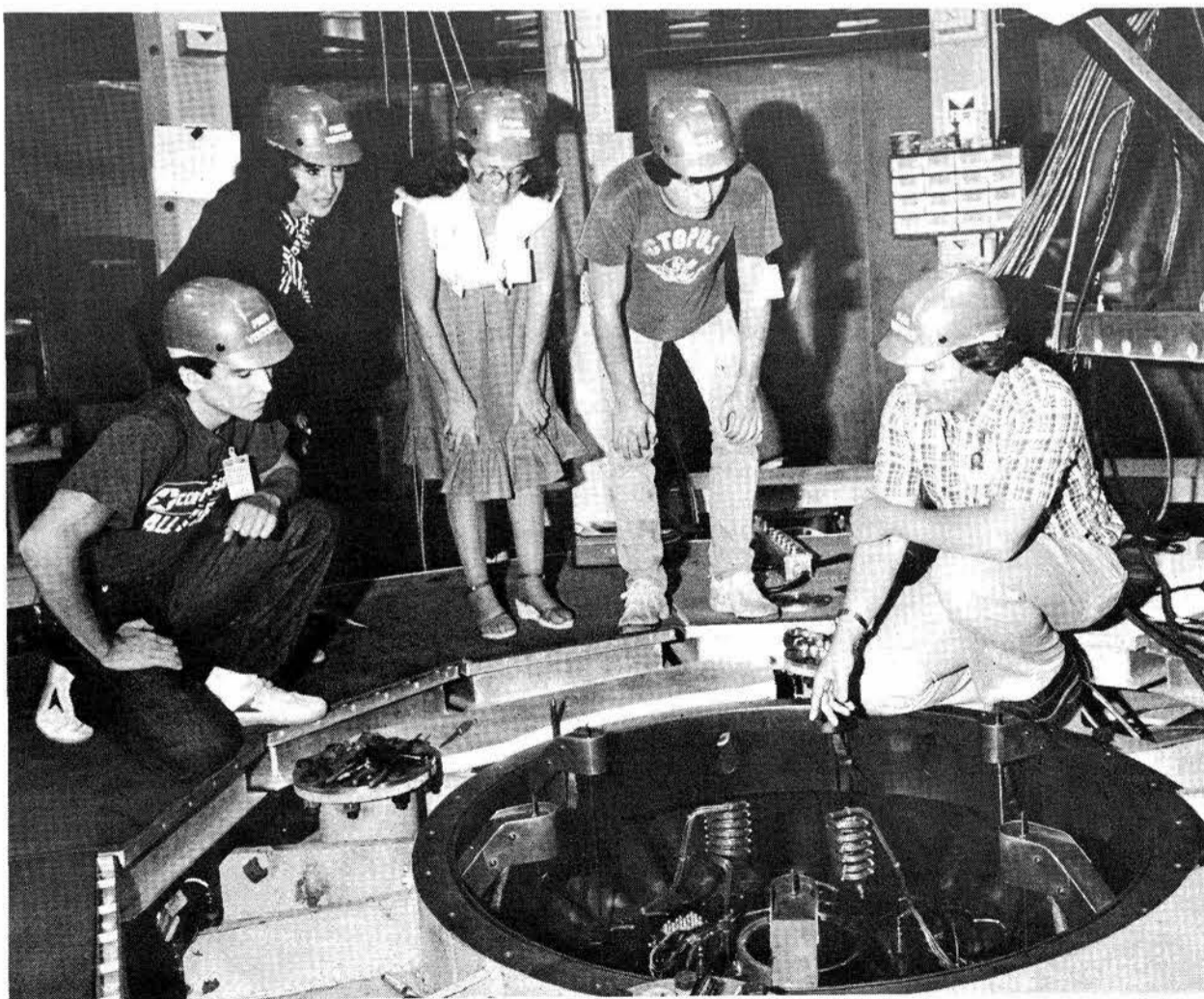
Because WINS is a self-contained, three-axis navigator, it requires no cable length measurements—an error source in other systems. WINS also is insensitive to tool-wellbore misalignment, is capable of resolution of a few centimeters, and, because of its shorter time in the borehole, has less exposure than other systems to high temperatures encountered in geothermal and deep oil/gas wells.

The WINS probe uses a roll-stabilized single gimbal platform to isolate the gyroscopes and accelerometers from probe rotation. Output from one of the gyroscopes drives a torque motor that prevents gimbal rotation.

During the recent field test, the probe was run twice down a 7000-foot, nearly-vertical borehole. Results from each run agreed within three feet, demonstrating excellent repeatability. Survey rates were restricted to 350 feet a minute because of winch limitations.

"The WINS concept will need further refinement before it's ready for the commercial market," says Stew. "For example, smaller and more accurate gyroscopes, more compact downhole electronics, increased temperature tolerance and ruggedness, and additional surface computer software."

An error analysis by Al Watts (formerly 1622, now 0324) was the first indication that transferring inertial navigation weapons technology to this energy application could be successful. The NTS Staff Division 7131 helped with field test support. Funding came from DOE's Geothermal Technology Development Program managed by James Kelsey's Geothermal Technology Development Division 9741.



EXPLORING THE TARGET at the heart of the Particle Beam Fusion Accelerator are three local high school students who form the pilot program of a Career Exploration Program for gifted students. Sponsored by Albuquerque Public Schools with the cooperation of Sandia and other companies, its goal is to let them work with professionals and thus give them a realistic picture of technical professions and the careers available within those professions. Here, Ray Leeper (1243) explains the PBFA concept to (from left) Joe Worden, Soila Brewer (3533, and the Sandia coordinator for the program), Elizabeth Chambers, and Mark Mathews. The three students will spend 15 hours a week for several weeks at Sandia as well as with other companies on the same basis throughout the semester.

Countryman is New MADD Volunteer

Bill Countryman is not finding much leisure during his retirement. He's playing an active part in New MADD—New Mexicans Against Drunk Drivers.

His involvement came about after learning that, while alcohol is a factor in 50 percent of vehicle deaths nationally, 66 percent of the deaths on New Mexico highways are alcohol-related. "We're leading the country, but we'd be winners if we could drop in the standings," says Bill.

"I was struck by the fact that we devote a great deal of time, money, and effort to promote various social programs and to protect our environment, but we are complacent about the greatest danger of our time—death on the highway, most of it caused by drunk drivers. I'm trying to help jar all of us, especially the legislators and judges, out of our apathy."

Earlier this year, Bill was instrumental in organizing New MADD and is now vice-president of the group. Its primary goal is simply to get the problem drinkers off the roads. Pointing out that one of every two people in the state can expect to be killed or injured on the highway sooner or later, Bill feels strongly that something's got to be done—reduce the leeway of judges in sentencing drunk drivers, find a limited security place to incarcerate drunk drivers (the jails are too full to house those arrested on DWI charges), make punishment for drunk driving offenses not more harsh but more sure—"certainty, not severity, seems to be the key," Bill says.

Most of the time, one of every 20 drivers with whom we share the highways has been drinking; on Friday and Saturday nights that figure rises to one in 10. "And we worry about taking a plane trip!" exclaims Bill.

One reason for our tendency toward leniency toward drunk drivers is the notion that accidents are caused by people who have had no more than two drinks. Given our alcohol-equals-entertainment society, it's not surprising that many of us mutter a "there but for the grace of God go I" and refuse to push for punishment beyond wrist slaps for drunk drivers. But Bill and other people who have studied the problem assert that the overwhelming bulk of alcohol-related accidents are caused by people who have had far more than a couple of drinks—despite what they tell an officer at the accident site. It's this group of heavy drinkers, whether frequent or occasional, who are New MADD's primary target.

The group seeks volunteers to: 1) help man a booth at the State Fair; 2) begin a court monitoring project in order to let the public know how various judges sentence drunk drivers; and 3) work against massive apathy in the face of a massive problem.

Another retiree, George Volda, is also active in New MADD. If you're willing to join them (or if you just want to help out at the Fair), call 243-5219. You don't have to be a retiree, and you don't have to be a teetotaler.

George Cosden Is 'Master Blaster'

Sundown tonight marks the start of the year 5743 on the Hebrew calendar. Rosh Hashanah, the observance of the Jewish New Year is a solemn, religious matter. Included in the rituals is the blowing of the ram's horn, the shofar.

Not many individuals qualify as a Baal Tekiah or Master Blaster—one who is fit and able to blow the required one hundred blasts, calls, and alarms. The sounds are the ancient ones passed on by Master Blaster to Master Blaster for three-plus millenia. The phrase "fit and able" includes the sense that the Baal Tekiah

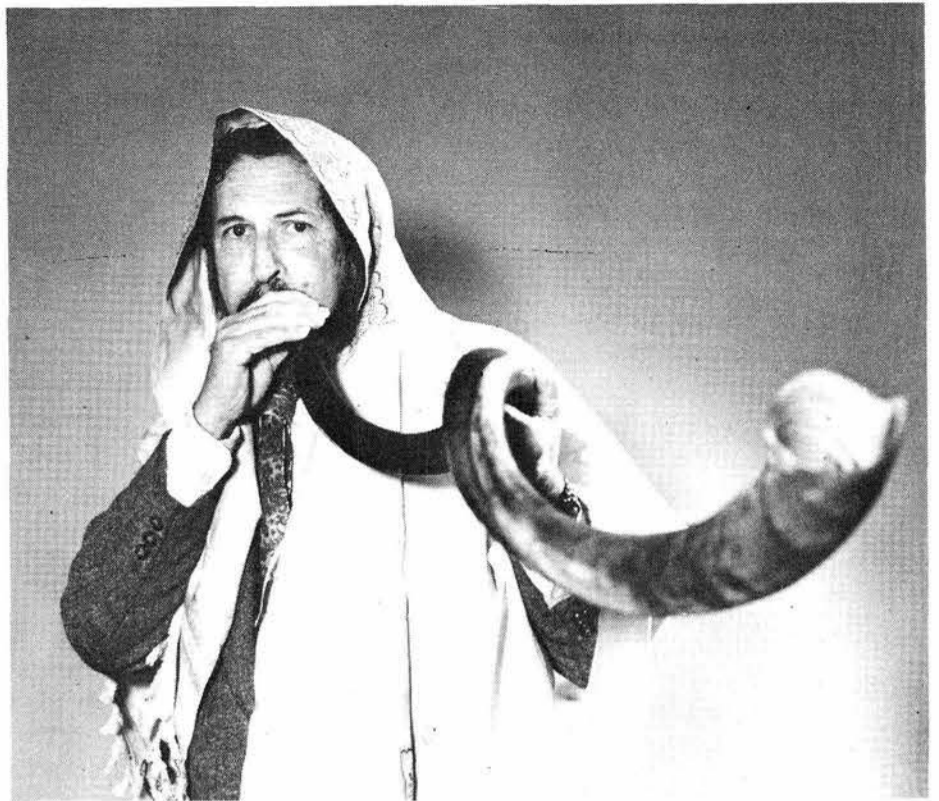
is an individual of honest character, a believer, and one who is officially sanctioned.

George Cosden (3732) has been such a Master Blaster since he was 13 and a student in a Hebrew parochial school in the Bronx. George blows one of his ram's horns for services of Chavurat Hamidbar, an Albuquerque "fellowship of the desert." This modern group (which retains rituals) is a Jewish congregation meeting at the UNM Alumni Chapel for the High Holy Days services.

The major motif of the Days of Awe—the 10 days between Rosh Hashanah and the Day of Atonement, Yom Kippur—is return. The anniversary of the beginning of the world is commemorated by returning to the beginning of the right path. It is for this purpose that the shofar is blown. It is a call to return to the beginning.

Maimonides, Hebrew philosopher, said it this way:

"Sleepers, awake from your sleep! Slumberers, arouse yourselves from your slumber! Search your deeds and return to and remember your Creator. Look to your souls and better your ways."



GEORGE COSDEN (3732) blows the ram's horn marking the beginning of the Jewish New Year. He is wearing a tallit, a prayer shawl he purchased in Israel in 1949.

"The smoothly curved ram's horn has an aura of the primitive about it," George says. "For people saturated with sophisticated technology, the shofar appears to be atavistic—a throwback to hoary antiquity. And perhaps this is precisely why the shofar is so exciting and stirring. It takes one back to places inside that are very basic, near the root of one's being. Since the shofar is used mainly at the time of the year when it is most important to be in touch with one's self, finding those places is critical."

George owns two "regular" foot-long, medium-size horns and one very special, four-foot-long, double-curved ibex horn. Each horn has a distinctive sound.

In addition to participating in services for the Chavurat Hamidbar tonight, George will blow the ram's horn for Tashlich services at the UNM duck pond at 4:30 on Sunday, Sept. 19. He has participated in services for many Jewish congregations over the years, and has provided ram's horn recordings for out-of-town groups.

"Blowing the ram's horn requires more than practicing," George says. "It is a special gift." Then he modestly adds, "It's my only talent."

Fun & Games

Running—The Showdown Wilderness Run challenges the skill and endurance of runners anxious to try true cross-country racing. Portions of the longer course wind through canyons where there are no trails and only ribbon markers to follow. There are eight running categories, open men's and women's, master's men (40 yrs.) and women's (35 yrs.), and two courses (8½ and 5½ miles). The gun goes off at 9 a.m. on Saturday, Sept. 25, at Showdown Tennis and Swim Club just east of Tramway and Montgomery. This race is in memory of Pete Barney, coach and teacher at the Albuquerque Academy who recently died after a pool accident. All proceeds of the race will go to the Academy Bear

Canyon Project, and each participant will receive a race T-shirt. Entry fees are \$8.00 and \$5.50. Inquire at Showdown Tennis and Swim Club (293-5820) or pick up entry blanks at local sport shops or at LAB NEWS office (MO-125).

* * *

Running—The New Mexico Track Club will hold its annual Tour of Albuquerque Marathon on Oct. 17. T-shirts, refreshments, and other inducements will highlight the run. Registration forms are available at Running Shoe World, 3515 Lomas NE, or get more info from Chuck Atencio (2632) at 4-5976.

feed back

Q. I notice a lot of infractions to what used to be parking rules, especially in the lot just east of Gate 6. People are parking as much as two deep at the south end of the lot [outside of regular spaces]. Also, the section designated "Official Business Only" seems to have the same cars every day, mostly latecomers. And spots designated "two or more" have singles. My question: Have the rules been dropped or are they no longer enforced?

A. No, the rules have not been changed. Security is aware of the situations you cite and is issuing tickets or warnings daily. In addition, work orders to identify "no parking" areas outside established bumpers have been submitted. Finally, we must request employee cooperation, which is essential if we are to continue to have a fair and workable system of parking at Sandia. The security organization cannot devote much effort to see that employees act responsibly when parking their vehicles. Rules on parking are like any other company rules and employees are expected to comply.

D. S. Tarbox—3400

Q. For many years, the Sandia Stores withdrawal system has left much to be desired. Not only has one of every three of my material requisitions been incorrectly filled [due to the wrong item having been placed in the wrong bin], but I fail to see the necessity of three separate groups of electronics stock [requiring three separate MRs], whereas 100,000, 600,000 and 800,000 series stock listings are intimately intermixed throughout the parts catalogs.

A. For approximately 20 years the General Stores withdrawal system has been set up by numerical sequence and commodity. These areas are physically separated to facilitate filling the Material Requisitions. At present, we are installing a computer system which will remove any requirement for commodity or stock number sequence separation. We request your patience until the new system is in operation.

In the meantime, when you receive the wrong material, it would help to prevent repeating the mistake if you would contact the Stores Section Supervisor on extension 4-7566. He will determine the cause and correct the mistake.

J. C. Strassel—3700

Q. The motorcycle parking outside Gate 6 was never very adequate, but now that more employees are riding motorcycles to work, the situation has gotten worse. Are there any plans to improve motorcycle parking facilities outside Gate 6?

A. Thank you for your suggestion. The area will be improved to provide more parking spaces and improved safety.

R. W. Hunnicutt—3600



HOSTING some budding scientists and engineers are, (l to r in the back row) William Brown (1533), Sharon Holmes (CAP coordinator), Anthony Thornton (1633), Roberta Ingram (7411), Adrian Jones (5532), and Brenda Steele (3144). They are all participants in CAP—Career Awareness Program—sponsored by the National Technical Institute.

A Feather in Their CAP

Fifteen Sandians are members of the Albuquerque chapter of the National Technical Association (NTA), an organization of black scientists and engineers founded in 1926. NTA encourages minorities to participate in science and engineering and provides a means of communication among those already in the professions.

About two years ago, the local NTA chapter initiated a Career Awareness Program (CAP) to steer promising youngsters toward careers in science and engineering. CAPs are currently being conducted in Atlantic City, Chester, Pa., Cleveland, and Huntsville, Ala., as well as in Albuquerque.

CAP, which can accommodate 50 students, has a part-time paid staff including two instructors, two student aides, a counselor, and a typist. Sharon Holmes, a middle school science teacher, coordinates the program. Six of the fifteen Sandia NTA members assist with the CAP by making presentations to the students. The six are Roberta Ingram (7411), William Brown (1533), Ronald Boyd (1513), Brenda Steele (3144), James Lucus (1835), and Anthony Thornton (1633). Other Sandia members are Ivory Alexander (1612), Fred Heard (9742), Henry Monteith (7213), William Nance (2151), Basil Steele (7764), Clarence Washington (0324), Gwendolyn Washington (0323), and Ann Webb (7121). Adrian Jones (1532) is the current president of the local NTA chapter.

"In early August, William Brown and I accompanied 10 mid and high school students to the NTA convention in Baltimore," says Roberta. "Two of the Albuquerque children were awarded the first and second prizes for their science projects—out of a total of 150 students from four other cities.

"While in Baltimore, the children met many research scientists and engineers. We also took them to the National Aquarium and the Baltimore Science Center. The high point in their trip was being introduced to Lt. Col. Guion Bluford, an aerospace engineer and NASA mission specialist. Bluford is scheduled to be the first black American astronaut to go into space."

Roberta explains that CAP is funded through NASA and several private companies. To get into the program, a student must be recommended by two teachers, maintain a grade average of B or better, and show potential as a scientist or engineer.

"The staff works with children throughout the year," says Roberta. "During the school year, sessions are held on Saturdays. In the summers, they work four hours a day, four days a week."

Program activities include demonstrations and presentations by practicing scientists and engineers, career and motivational counseling, development of math skills, and hands-on experience with devices such as computers and electronic circuits. The students meet at the Afro-American Center on the UNM campus, but they also take field trips to Sandia Labs and other locations—once even to Uncle Cliff's Familyland to study physics principles as demonstrated in some of the more exciting rides.

Although CAP's principal thrust is to identify promising black students, it also takes non-black children. CAP is only one of the projects of the local NTA chapter; membership is open to anyone supporting the organization's goals and membership. NTA is currently conducting a local membership drive. Anyone wishing to know more about CAP or NTA may contact Roberta or one of the other NTA members at Sandia.



SALISBURY TAKE—David Strip (9415) has his picture taken near Salisbury, England, during a 1500-mile tandem bicycle tour of England. His wife, Jeri Frank, usually occupied the back seat of their Schwinn Paramount in front of



the 40 pounds of gear in the bags, but she took the photo. At right is the medieval castle at Carnarfon in North Wales, one of many visited.

Unusual Vacation

Yankee Pedalers Tour England

[Ed. Note—Taken an unusual vacation recently? Tell us about it. Call 4-1053.]

Pedaling 1500 miles on a tandem bicycle through the English countryside is not your standard vacation. David Strip (9415) and his wife, Jeri Frank, made the trip, pedaling up hill and down for five weeks earlier this summer.

They flew to Heathrow airport near London, assembled their bike from its eight-foot-long, 75-pound carton, and pedaled away with only a set of road maps and a couple of destinations in mind.

"We wanted to visit friends in Guildford, meet Jeri's co-worker from Manzano Day School in Wales, and attend the international bicycling festival at Harrogate," David says. "We had plenty of time to do a lot of sightseeing—museums, castles, Stratford-on-Avon, Stonehenge, a Welsh folk festival."

The couple averaged 50 miles a day, staying in small hotels and "bed and breakfast" lodgings.

"These are frequently someone's spare bedroom—not bad, but for hungry cyclists the breakfast doesn't match its legendary size," David says.

"What you hear about English food is

true," David continues, "particularly for a vegetarian. It's expensive, also. But their pastries are great. We made a lot of stops at pastry shops. When it rained, we stopped even more often."

The weather for the trip was "beautiful" for the first 12 days, "rained constantly" for the second dozen days, then cleared during the last few days.

In England's Lakes District, the couple pedaled 70 miles one day in the rain. "The hills are rough," David says. "Grades of one foot up for every four ahead plus the rain can make for a tough day. There were other steep grades in the North York Moors."

At Stratford, the couple attended a four-hour production of *King Lear*. The audience was mostly American tourists. "It's culture," David says, "but that's a lot of Shakespeare."

David and Jeri enjoyed the countryside and the leisurely pace. "It's gorgeous," he says. "Reminds me of upstate New York—the green hills, lakes, and forests. Very pleasant, and people were friendly and helpful."

One of the highlights of the trip was meeting Jack and Norman Taylor, famous pre-WWII bike racers and now man-

ufacturers of custom bicycles. After spending a morning visiting their shop, the Americans ordered a custom "bicycle built for three," just because it would be fun to have.

They met some more bicyclists at the three-day international bicycle festival at Harrogate, participated in a 100-kilometer ride, and watched some exciting races. At the festival banquet, David and Jeri received a prize for "biking 1000 miles to attend."

They wrapped up their visit by sightseeing at Cambridge and Oxford, spending a day in London, then pedaling back to Heathrow.

"All in all, a very pleasant and satisfying time," David says. "We visited a foreign country without a language problem, saw some beautiful scenery, met a lot of nice people."

Logistics: Roundtrip airfare to London cost \$806 per person, the bed-and-breakfast lodgings averaged \$10 per person per night. David figures they averaged about \$40 total for food and lodging per day. There was no extra airline baggage charge for the bicycle, and it was accepted for the return flight uncrated.

Buy a Card, Save a Wolf



The Mexican wolf once roamed freely throughout the southwestern United States and Mexico. Today there are perhaps 30 left in the wild, all in Mexico. To save the species from extinction, the U.S. Fish and Wildlife Service and Mexico's Dirección General de la Fauna Silvestre have initiated a captive breeding program. The Rio Grande Zoological Park is one of four U.S. zoos selected by the Fish and Wildlife Service to receive a pair of these magnificent creatures. They may be seen in the zoo's new James R. Modrall Memorial Wolf Exhibit.

The above message appears on the back of a card designed by Jim Walston (3155-4) for the New Mexico Zoological Society. A

pencil drawing of the head of a Mexican wolf appears on the front of the card. Two card styles are available—one with a suitable seasonal message inside, and the other left blank to be used as a note card. Both cards and envelopes are printed on recycled paper.

The Zoological Society announces that this year's wolf card is the first in a series that will feature a different endangered species each year. Proceeds from the sale of the cards will benefit the zoo's efforts to help save the Mexican wolf and other endangered species.

The cards (10 per package at \$4) are available at several galleries, book stores, and gift shops in the city, and at the new gift shop at the zoo.



BOND DRIVE CLIMAX—At the 1982 Savings Bond Drive Committee luncheon, President Dacey accepted the Treasury Department's Minuteman Flag Award from Committee Chairman Morgan Kramm (9230). The award was presented to Sandia employees for attaining at least 50 percent participation in this year's bond drive. Actually, Sandia did much better than that: 92 percent participation, with 100 percent participation by 305 divisions, 39 departments, and the 3500 directorate, coordinated by Al Villareal. During the drive, 509 new savers enrolled, and 371 participants increased their allotments. Annual deductions now stand at \$1,370,000. Also at the luncheon, Morgan announced that legislation authorizing a variable rate interest bond that will pay 85 percent of market rates was passed with the recent Tax Bill.



THIS FURRY FELLOW survived a detonation by KAFB's Explosive Ordnance Demolition team of obsolete high explosives recently. He's a baby cottontail discovered in the resulting crater. Maxine Stephenson (3423) is caring for him until he's mature enough to return to the wilds.

Take Note

Cecilia Chang (2626) informs us that the Albuquerque Chinese School will hold its annual Moon Festival on Saturday, Oct. 2, at St. John's United Methodist Church, 2626 Arizona NE from 12 to 5:30 p.m. According to the announcement Cecilia sent us, "On the 15th day of the eighth month of the lunar calendar, when the moon is believed to be at its brightest, the Chinese Moon Festival is held and thanksgiving is expressed for the good summer harvest." There'll be food, folk dances and songs, arts & crafts, prizes and lots more for just \$1 admission. For more info, call Cecilia at 265-6209, or Mary Tang (3521) at 293-9331.

* * *

Being a step-parent isn't easy. The first meeting of an Albuquerque chapter of the Stepfamily Association of America will be held Sept. 23 at 7:30 at Cleveland Middle School. The chapter plans groups for stepmothers, stepfathers, and stepchildren. Call former Sandian Kathy Padilla at 843-9525 for more info.

* * *

Have you ever thought about learning to square dance? Do it now—at no cost. The Spares and Pairs Square Dance Club is offering modern square dance lessons (free-of-cost) each Thursday evening at 7 at the Albuquerque Garden Center, 10120 Lomas NE. For more information, call Tonimarie Stronach (3152), 255-8315, or Louis Martinez, 345-1696 (days) or 293-9219 (evenings).

The Fifth Biennial CUBE (Computer Use By Engineers) Symposium is set for Oct. 27-29 at the Regent Hotel. The Symposium is noted for the opportunity it provides engineers at Sandia, Los Alamos, and LLNL to exchange information on hardware and software developments. Preregistration by Sept. 30 is required; get brochures with program and registration forms from Bertie Denman (2613).

* * *

Anything at the Fairgrounds from Sept. 14 through 26 is fair game to amateur photographers who can win some prize money if their photos are judged tops in various categories. Rules are simple: photos must be at least four by five inches, in B/W or color, and shot at this year's Fair. Entries are due by Oct. 20. Get premium books with further info from Box 8546, Albuquerque, 87198.

* * *

The Albuquerque International Balloon Fiesta will be held Oct. 2-10. This is the 11th annual Fiesta held in Albuquerque, and more than 500 hot air balloons are expected for the event. Last year, foreign entries from 22 countries as far away as Japan and Australia were present. The nine-day program includes: Centennial Gas Balloon race, Navy Leapfrogs and Army Golden Knights parachute teams, ultralight aircraft, model airplane contest, NM Symphony Orchestra concert, kite flying contest, ethnic food and dancing, old time air show, military band, Air Force Thunderbirds, Double Eagle V gondola display, Fiesta parade, and spectacular mass ascensions. LAB NEWS has a few copies of the Fiesta program. Stop by and

pick up one or, for more information, call Ruth Birdseye (3132), 255-6328, or the Fiesta committee on 883-0932.

* * *

Two groups of Sandia apprentices received certificates for completion of five-year programs at graduation ceremonies recently.

Recognized in the machinist apprenticeship program were Henry Baca, Dennis Dunn, Dean Manning, William Vansalous, and Charles Holloman.

Completing the plant maintenance apprenticeship were Bernard Alexander, Willie Doyeto, Marvin Nicholson (all electricians), and George Barbera (mechanical technician).

* * *

Retiree Felix Padilla continues to paint New Mexico landscapes and win awards in national art shows.

A single acrylic painting—"Day's End" which depicts a northern New Mexican village at sunset—was honored with a first place at the Black Canyon art exhibit in Hotchkiss, Colo., another first in a recent Grand Junction, Colo., exhibit, and a best-of-show award at the Alpine Holiday art show in Ouray, Colo. The show sponsors purchased the painting for their permanent collection.

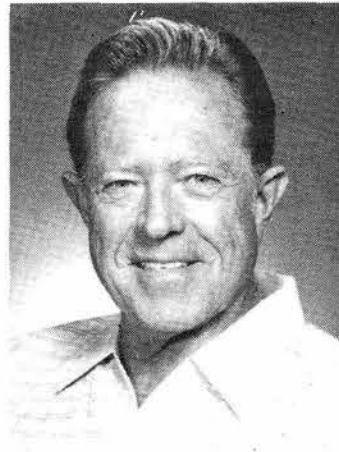
Other paintings by Felix were awarded a second and third place plus an honorable mention at the recent Carlsbad Tri-State art festival.

Felix reports that for the first time in his life he has plenty of time to devote to his art and that he's keeping busy at it. Currently, some of his work is displayed at Nightsong of Taos Gallery in Old Town.

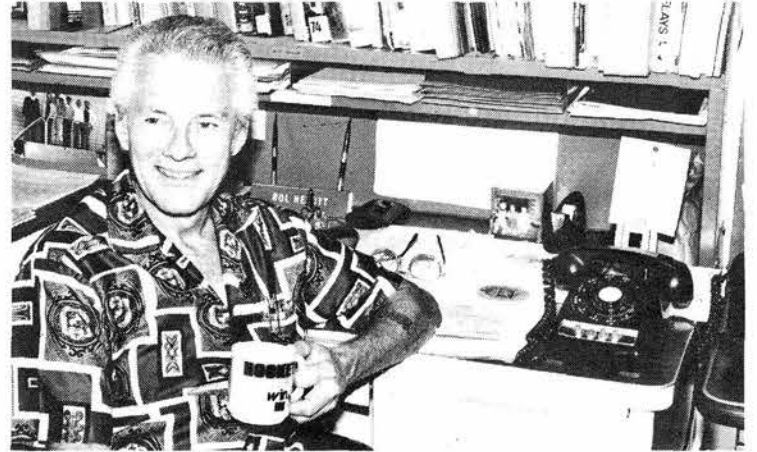
MILEPOSTS

LAB NEWS

SEPTEMBER 1982



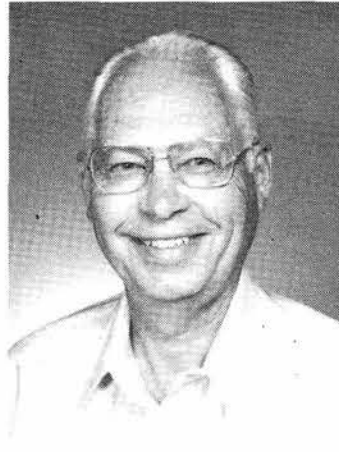
Jim Beudet - 9234 30



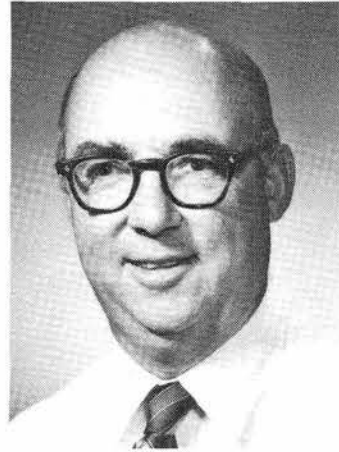
Rol Hewitt - 7137 25



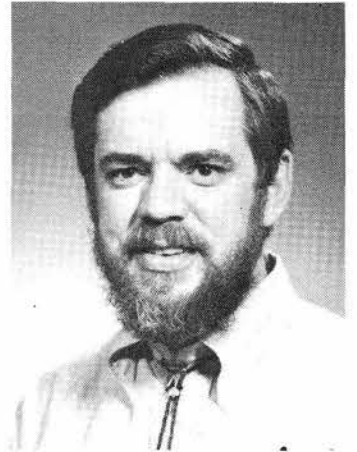
Angie Gurule - 3152 30



Ralph Fisher - 1833 35



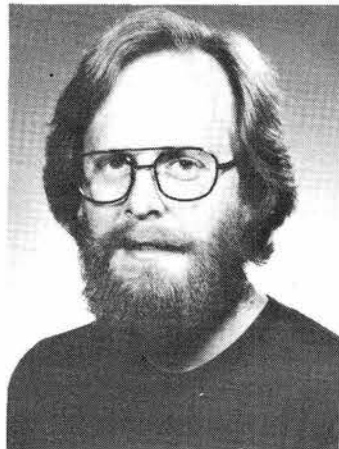
Barry Butcher - 1532 20



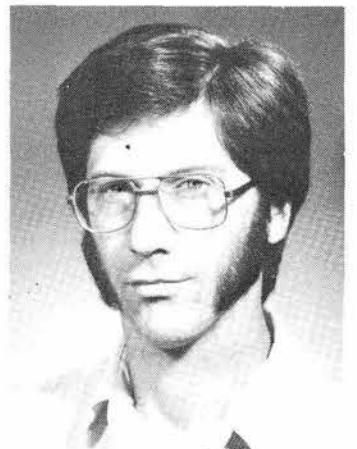
Mel Olman - 2614 15



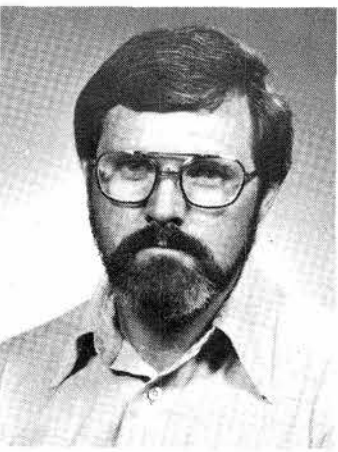
A. C. Ellington - 7418 30



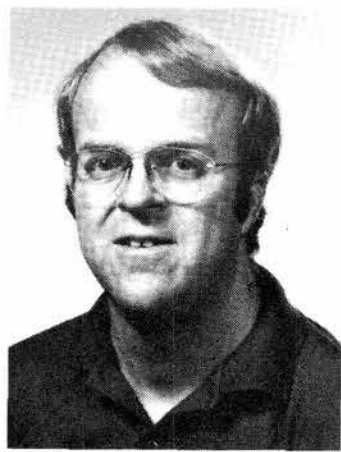
Gary Jones - 1814 15



Bill Andrzejewski - 2516 15



James Hobb - 2562 10



Bob Easterling - 7223 15



Art Engquist - 2156 30



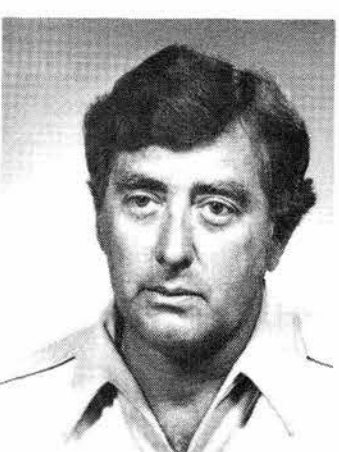
Floyd Elder - 3618 30



Fred Deiber - 2452 35



Steve Ross - 1800 15



Fred Gunckel - 2545 15

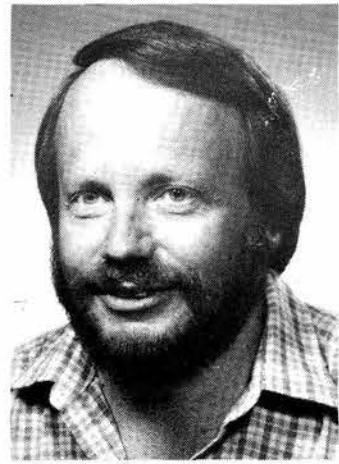


Marie Vaughn - 3332 10



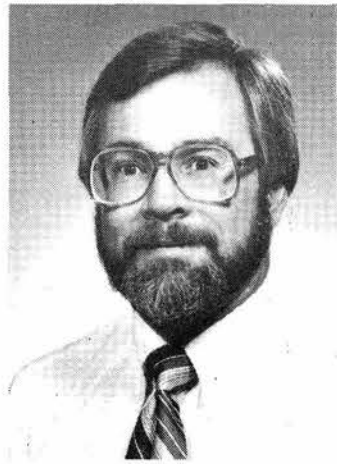
Earl Scott - 2552

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Pat Moore - 1651

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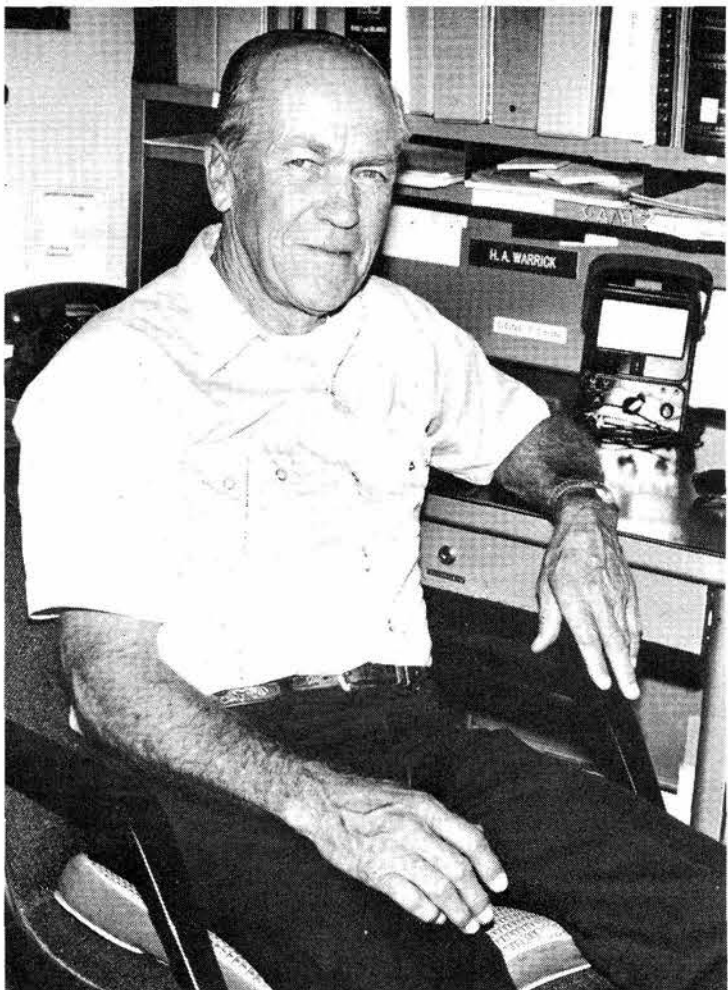
Jerry Barr - 1201

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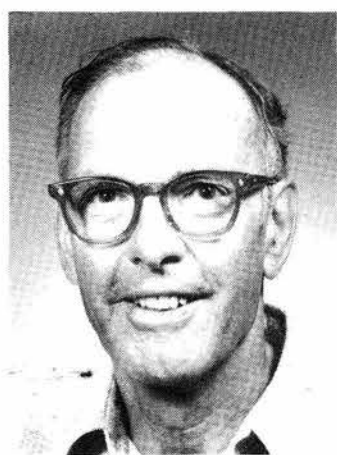
Ken Ronquillo - 1632

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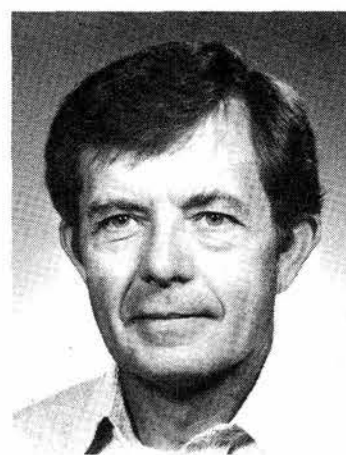
Harry Warrick - 7137

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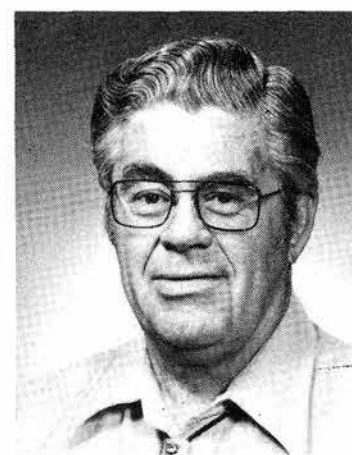
Norman Smith - 9263

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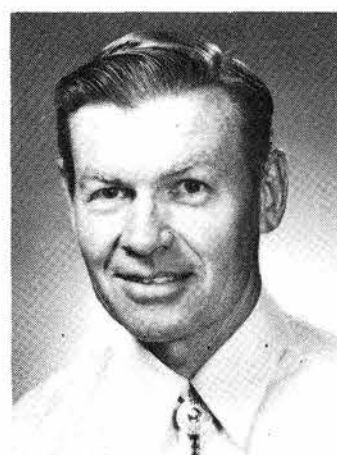
Ron Bentz - 2343

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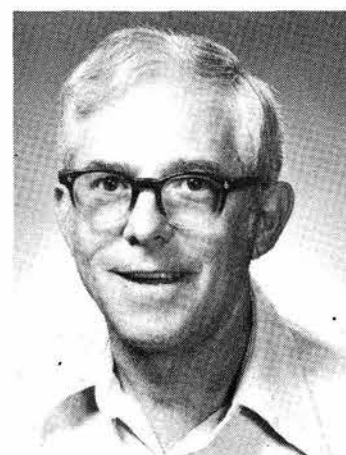
Gilbert Wallace - 3441

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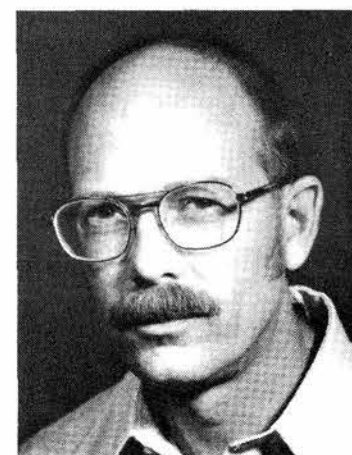
Robert White - 7554

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Paul Gaither - 9320

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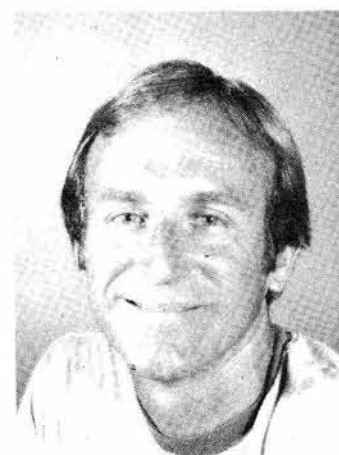
Gary Snow - 2527

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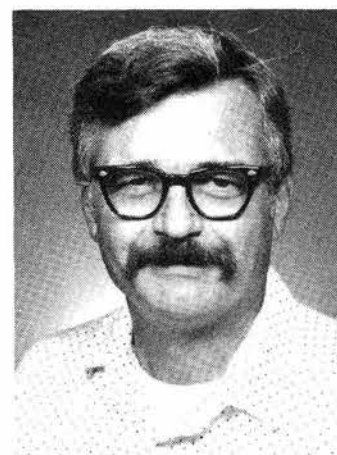
Robert Isidoro - 7423

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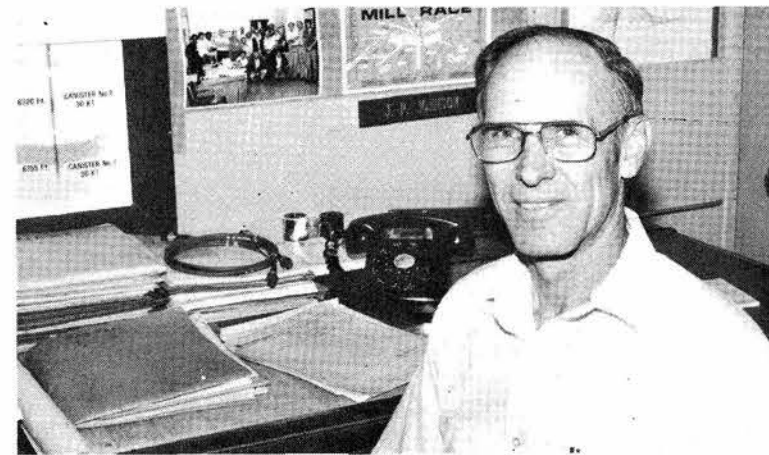
Charles Healer - 7483

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Roger Edwards - 2153

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John Johnson - 7132

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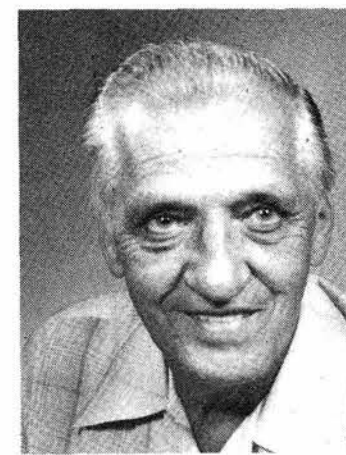
George Kupper - 3715

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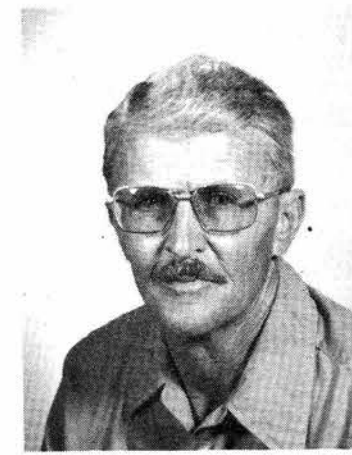
Rusty Puccini - 9315

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Emil Komarek - 2122

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Gene Harty - 9315

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Events Calendar

Sympathy

Sept. 16-19*, 23-26*—"Medea," classic Greek theater tragedy, Vortex Theatre, 8 p.m., *2:30 p.m., Buena Vista and Central (across from UNM), 247-8600.

Sept. 17-19*, 23-26*—Classics Theater presents Agatha Christie's "Ten Little Indians," 8 p.m., *2 p.m., Kimo.

Sept. 19-21—"Cowboy Classic," NM State Fair Cowboy Art Show and Sale, 15 American cowboy artists; 19th, reception 4 p.m.; 20th, 10-8; 21st, 10-2 p.m., Classic Hotel.

Sept. 19-Nov. 5—"Native American Sampler: A Patchwork of Contemporary Art," Wheelwright Museum, Santa Fe.

Sept. 20—National Radio Theater, KUNM 90.1 FM, 10 p.m.: Jack London's "The Sea Wolf"; Sept. 27—Harold Pinter's "A Slight Ache."

Sept. 24-Oct. 3—Red River Annual Aspencade: Aspen Run Rally (4-wd vehicles), Jeep tours of Sangre de Cristos,

Jeep/horse rentals, chairlift for hikers, square dances and hoedowns, arts & crafts fair, turtle races, mountain man rendezvous.

Sept. 25—Laguna Pueblo, annual St. Elizabeth Feast Day; harvest, social dances; Paguete Village.

Sept. 27—Travel Adventure Film Series: "Africa," 7:30 p.m., Popejoy.

Sept. 27—"Building America," exhibit of carpentry and carpenters in North America. Sponsored by the Albuquerque Museum, The United Brotherhood of Carpenters and Joiners, and the NM Humanities Council. Coronado Center.

Sept. 28—Open House, Career Enrichment Center, 807 Mountain Rd. NE, 6-8 p.m.

Sept. 29-Oct. 2—Ruidoso annual Aspencade Festival: parade, motorcycle convention, concerts, trade show, arts & crafts fair, barbeque.

To Dave Salas (2611) on the death of his wife in Albuquerque, Aug. 31.

To Wayne Gravning (3153) on the death of his mother in Los Angeles, Sept. 2.

To Norman Schwentor (7485) on the death of his father-in-law in Fort Bayard, Aug. 27.

To Thomas Foucher (7481) on the death of his father, Sept. 5.

To Max McCoy (7482) on the death of his father in Albuquerque, Sept. 6.

To John Elskes (3426) on the death of his father in Albuquerque, Aug. 23.

To Dan Neff (3711) on the death of his father in Albuquerque, Sept. 18.

To Bill Hagemer (3426) on the death of his brother in Colorado Springs, Sept. 11.



HAPPY NEW YEAR... END OF LINE

In a two-year study of 500 people equipped with terminals attached to a computerized information network, the researchers found that 20% of their subjects became addicted to their diet of messages and other electronic chitchat. One man gave his wife grounds for divorce when he took his terminal to a New Year's Eve party. He was found talking to his correspondents on the network when the first chorus of *Auld Lang Syne* struck up.

—New Scientist

JUNK•GOODIES•TRASH•ANTIQUES•KLUNKERS•CREAM PUFFS•HOUSES•HOVELS•LOST•FOUND•WANTED•& THINGS

CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. Mail to: Div. 3162 (MO125).

RULES

1. Limit 20 words.
2. One ad per issue per category.
3. Submit in writing. No phone-ins.
4. Use home telephone numbers.
5. For active and retired Sandians and DOE employees.
6. No commercial ads, please.
7. No more than two insertions of same ad.
8. Include name & organization.
9. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

- FREE KITTEN, smoke grey, male, 3 1/2 mos. old, has all shots, trained. Jones, 881-1918.
- AM-FM stereo, 8-track w/recorder, 2 speakers, \$100; ladies' 2-spd. Schwinn bicycle, \$25. Morrison, 299-4757.
- REFRIGERATOR, coppertone, \$85; antique dresser, \$50; antique vanity w/mirror, \$50; electric typewriter, needs repair, \$75; record stand, \$20. Rodriguez, 296-3277, 344-4584.
- ADDING MACHINE, Sears best, \$65. Kohut, 884-4338.
- READERS DIGEST Condensed books, some dating back to the '50s, \$3 ea. or \$27.50 per 10 books. White, 293-2219.
- CRAGER SS mag wheels, 5-bolt Chevy, 2 ea. 14"x6", 2 ea. 14"x7", \$100. Clements, 293-5618.
- TWO COUCHES: black leather, 72", \$495; cream & blue, linen fabric, 78", \$295. Kjeldgaard, 268-8835.
- SHOTGUN, 20-ga. SS; binoculars, 7x35; tape deck, reel-to-reel, 3-head, sound-on-sound; TI 58 calculator, new battery; organ keyboard, 61 note. Ingram, 298-0390.
- AKC reg. Great Dane black puppies, \$200-\$250. Katzenstein, 345-6454 after 6.
- CARPET, 9x12, gold-orange-white; 8 1/2 x 11 1/2 brown oval braid rug, \$75 each. Hass, 299-3506.
- PORTLAND CEMENT, 8 bags, \$4 ea. Wrobel, 255-3062.
- VINYL rocker, \$30, needs reupholstering; 10x12 blue/green shag rug, \$20; clock radio, \$5. Kennedy, 298-0704.
- SKI BOOTS, men's 1980 Nordic Cosmos, size 10-10 1/2, \$65. Sopp, 293-1723.
- BEDROOM furniture: 64" dresser w/mirror, two 24" nightstands, queen size headboard, \$375; chair,

- bone, velour-type fabric, \$200. Harris, 821-8524.
- THOMPSON HAWKEN .54 cal. black powder, many extras, \$195; Heathkit 10-105 dual trace solid state scope 250; glass fp screen & blower, \$45. Matthews, 869-2370.
- VIC-20 computer, cassette & graphic extender, less than 6 mos. old, over \$400 value, sell for \$325. McDaniel, 299-6189.
- DELCO AM-FM stereo car radio, \$125. Jennings, 294-5287.
- CAMPER, Idle Time slide-in w/jacks, stove, ice box; sleeps 4, \$650. Padilla, 294-8130, 296-5237 after 6.
- TYPEWRITER, port. manual; Airequipt slide projector; 4 unpainted ladder-back chairs. Koterass, 255-7147.
- FERRET, sable colored, male, large cage, water bottle, food dish, approx. 1 yr. old, \$100. Kureczko, 265-3061.
- SNOW/MUD tires, F78-14, w/w tubeless, 2 ea., \$40 for pair; Schwinn 3-spd. bicycle, ladies', \$45. Cano, 296-6955.
- CHAINSAW, 3.7 cu. in. engine, 18" bar, \$175. Samuelson, 821-5243.
- DRAPERY ROD, extends to 120", \$10; "Super Shooter" elec. cookie, canape & candy maker, used once, \$7.50. Simons, 821-9343.
- UPHOLSTERED chair & ottoman, gold colored, \$75. Smith, 299-6873.
- ROLLER SKATES, women's 6-8; skateboard; pogo stick; baton, etc. Simpson, 298-4749.
- TWO trailer towing mirrors, fender type, both \$16. Moulds, 247-8433.
- PORT. sewing machine, \$40; Sears stereo record player w/2 separate speakers, \$40. Schneider, 299-6243.
- MCCULLOUGH Mini-Mac chainsaw; skis; boots & bindings; Wards "Lazyboy" type chair. Mason, 281-3052.
- NEW CLOTHES, kids' size, cost plus \$1; 25-gal. aquarium; Daisy seal-a-meal, \$10; framed DeGrazia's; Sat. Sept. 18, 9-4. Baldwin, 6904 Orphelia NE.
- WOODBURNING STOVE, front-loader, firebrick, firescreen, heats 2200 sq. ft., never used, orig. cost, \$450, sell for \$350. Hueter, 299-7263.
- HIKING BOOTS, size 9, \$6; Bell bicycle helmet, size 7 1/2-7 5/8, \$12; glass fp screen, 28"x43", brushed brass, \$45; child's bicycle seat, \$5. Benton, 877-2473.
- SOFA/BED, dark brown velvet queen size; exercise bicycle, \$100. Burstein, 296-0463.
- BEDROOM SET, 3 pieces, \$250. Diegle, 294-5565.
- SPLIT RIMS for 3/4 Chev. pickup, 8 holes, for 16" tires. Chavez, 867-2213.
- TEKTRONIX oscilloscope, model 531, w/dual channel plug-in, \$250; 21" Sears Silvertone color TV, \$100. Kraft, 299-2157.
- FREE to good home, orange tiger cat, neutered, all shots. Tolman, 296-8239.
- SHOTGUN, 12 ga. Winchester Model 12 pump action, full choke, smooth barrel, \$350. Womelsduff, 281-1693.

- VIOLIN, full size, bow, case, from Mittenwald, Germany, \$450. Moss, 298-2643.
- CIRCLE Y show saddle, almost new, sterling silver, 15 1/2" seat; QH tree. Eckley, 266-8021 after 6.
- REGISTERED AQHA mare, 4 yrs. old, prof. trained, excellent disposition & bloodlines, ready to show or breed. Dewhurst, 266-8021 after 6.
- LARGE oak parquet coffee table, new \$450, will take \$275, interesting shape. Pickel-McCoun, 836-1025.
- PATIO FURNITURE: 5-pc. yellow w/cushions & glass top tables, \$200; 5-pc. wrought iron set w/onyx top table, \$125. Cover, 881-3860.
- CAMPER SHELL, short wide, 80"x74" O.D., panelled, insulated, wired for AC, \$260. Dourte, 881-2494.
- MAMIYA RB67 camera system. Burd, 884-9133.
- WIND GENERATOR, Jacobs 1500 watt, \$1400; Kohler 3KW motor generator, \$100; Sears 12 volt DC-AC 500 watt inverter, \$75. Hund, 281-5297.
- SEARS pressure cooker-canner, lg. size, 18 pt., 7 qt., instruction book, new, \$95; asking \$45. Mathey, 345-6312.
- TIRES: 4 Michelin XAS 175HR14, \$200; 2 Semperit snow radials, 165SR14, \$75. Miller, 266-9377.
- SEARS Kenmore washer & dryer, pair \$125; lawn mower, gas, \$75; stereo receiver, 8-TK & turntable w/speakers & stand, \$45. Jojola, 294-7354.
- REDI-2-MIX mortar cement, 4 60-lb. sacks, \$1.50/sack; 3/4" galvanized steel conduit, 75% of store price. Hughes, 299-6674.
- MOTORCYCLE tire, used, Continental 3.25 H19, ridden 3000 miles, \$30. Kovacic, 281-1754.
- KINGSIZE waterbed w/sheets, \$125; Philippine mahogany butcher-block couch, \$450. Bell, 293-6432.
- SIMMONS hide-a-bed, green, \$150. Harris, 299-4559.
- ZACHARY electric organ; 10' gold-olive couch; walnut game table-dinette set; wrought iron slate top dinette set. Barnes, 821-3794.
- GARRARD turntable w/Shure cartridge, fully auto., dustcover, \$20. Hendrick, 296-2163.
- FLY-REEL SPOOL for Pflueger Medalist 1495 1/2 w/Scientific Anglers Air-Cel DT-8-F/S wet-tip line & backing, all new, \$25. Brammer, 266-5158.
- WINE MAKING SUPPLIES, entire outfit, \$25; 2 R.E.I. down 3-season sleeping bags, matched pair, \$80 ea. Plein, 884-3749.
- NIKON FM 50mm f/1.4, \$220. Passman, 821-4999.
- GARAGE SALE, Sat., 18th, 9-5: house plants, antique clocks, lots of misc. South on Juan Tabo, follow signs. Chorley, 12508 Charla Ct., 296-1454.
- E-FLAT CLARINET (played by a student as little as humanly possible), \$250. Buck, 296-5963.

TRANSPORTATION

- '72 HONDA 350 motorcycle, low mileage, plus spare engine & helmet, \$300. Wrobel, 255-3062.
- '78 SUBARU 4-wd wagon, luggage rack, 47K miles, \$3500. Wray, 345-0153, 345-7409.
- GIRL'S BIKE, 20", banana seat, \$40. Beegle, 296-5300.
- '79 YAMAHA 650 special, black, incl. windshield, luggage rack, helmets, other extras, 20K miles, \$1600. Mooney, 299-1774.
- TRIUMPH Bonneville 750 motorcycle, needs minor electrical work. Moriarty, 884-4106.
- 10-SPEED BICYCLE, Wards Open Road, 26", \$40. Moyer, 881-3879.
- '70 CHALLENGER, 318V8, PS, recent water pump-alternator-fuel pump, needs rear, \$500/offer. Kureczko, 265-3061.
- '77 WAGONEER, AT, PS, PB, AM/FM, \$4000 firm. Rea, 299-9315.
- '79 KAWASAKI 1000, bought new in May '80, 4500 miles. Brewer, 821-2518.
- '80 KAWASAKI 1000, fuel injection, 1400 miles, \$3300 or trade for '78-'79 small or reg. size truck. Herrera, 836-1768.
- '69 BUICK LeSabre 4-dr., 85,300 miles, \$1100. Hole, 255-1444.
- '78 SAAB GL99, AT, AC, \$5200; '78 Goldwing, full dress, extras, \$2800. Bukaty, 256-1637.
- SAILBOAT, 17' O'Day Daysailer II, w/trailer, cover & many extras, \$3200. Wenger, 821-0838.
- '73 FORD stn. wgn., 400 cid V8, PS, PAC, new tires. Burchett, 299-1689.
- 20" BIKE, 5-spd., hand brakes, black & chrome, \$65. Connor, 268-9497.
- 21' REINELL boat, galley, head, 2 tops, cover, many extras. Falacy, 293-2517.
- '65 CORVAIR, white Monza sport coupe, 4-spd., one owner, \$2500. Wente, 299-5274.
- '75 FORD LTD, 4-dr., 57K miles, loaded, \$1500; '72 Suzuki GT380, low mileage, \$550. Rowe, 299-0961.
- '64 BUICK Wildcat, 2-dr., maroon w/white top, PS, PB, AT, cassette AM/FM stereo, \$495. Lang, 884-5288.
- 14' BOAT & trailer, 25 hp Evinrude motor, \$2800; trailer towing mirrors, truck mirrors. Phillips, 296-4084.
- SCHWINN BMX, tuff wheels, V-bars, quick change, tubular forks, pads, \$90; new Schwinn BMX frame, \$40. Campbell, 294-6000.
- '77 MUSTANG II hatchback, V8, auto. on floor, PS, PB, copper exterior, fawn interior, \$2995. Taylor, 296-6657.
- '72 PINTO station wagon, 4 cylinder, two-door, 4-spd. manual, luggage rack, regular gas, \$950. Hawkinson, 281-5239.

- garage, 12% FHA assumable, low equity, Copper-Juan Tabo area, \$64,900. Ames, 298-7145.
- 5 ACRES on southwest mesa (Pajarito area), \$2900 down & assume \$4320 balance at \$61/mo., 9.5% interest. Mauldin, 293-2079.
- '78 Solitare Imperial MH, 14x80, 2-bdr., 2 baths, appliances, carport, porch, fenced back yard, in adult park, near Base. MacPherson, 293-1090 after 5.
- '79 Centurion MH, 14x64, 2-bdr., 1 1/2 baths. Jones, 881-1918.
- 3-BDR., 1800 sq. ft., NE, plus separate 600-sq.-ft. apt., terms available. Bukaty, 256-1637.
- 2-BDR. & den or 3-bdr., 1 bath, near Base & schools, \$40,300 cash price. Pritchard, 299-3543 after 5.
- LITTLE TURTLE 1250 sq. ft. townhouse w/fp, garage, wet bar, laundry rm., LR, den, lg. bdr. w/dressing area; pool & tennis courts, 10% below appraisal. Burd, 884-9133.
- FIVE lots in San Miguel subdivision, S14. Mason, 281-3052.

WANTED

- EXERCISE BIKE. Garcia, 298-7340.
- 2 BICYCLES: 3-spd., 1 male, 1 female. MacInnis, 898-1628.
- ELECTRIC typewriter w/power return. Cleveland, 298-0218.
- ROOMMATE, own partially furnished room & full bath, no pets, 1 child-ok*, \$175/\$225* plus 1/2 utilities. Levin, 299-0891.
- BLACKSMITH TOOLS: anvil, tongs, hardies. Temke, 298-8868.
- SCOUT uniforms: Cub Scout, size 8, den mother's blouse, size 10; Girl Scout, size 14; Brownie, size 10. Knapp, 294-6359.
- FABRIC REMNANTS, old nylons, tights, & stockings for crafts projects for senior citizens' home. Stronach, 255-8315.
- CHAIR in need of reupholstering, for class. Gorman, 255-4431.
- ALTO SAX for 4th grade boy. Evans, 299-6888.
- NEED Webelos den leader for 10 Cub Scouts, help & place to meet are provided. Bryant, 266-6166.
- TRAVEL CRATE for small-to-medium dog, strong enough to survive airline baggage handling. Hawkinson, 281-5239.

SHARE-A-RIDE

- RIDER TO HELP DRIVE to and from St. Charles, Mo., leaving Sept. 29, return 2 weeks. Hitchcock, 294-5153.
- RIDERS needed for Cedar Crest carpool. Leaves from Canoncito Rd. & N14. One need not drive. Burns, 281-3922.

REAL ESTATE

- 3-BDR, 1 1/2 bath, den w/fp, dbl.

New Board Members Elected

TONIGHT at Happy hour the Isleta Poor Boys play country and western music for dancing while a baked ham buffet with all the goodies is spread. Next Friday, Sept. 24, Jim Meek and the Country Showmen hold the bandstand, the buffet features fried chicken and fish.

ELECTED to the board of directors at the Club's annual meeting Monday evening were Don Hosterman (9372), Shirley McKenzie (2432), Phyllis Sanchez (3510), Ernie Montoya (3612), Jack Mortley (7521), Charlie Salazar (7418), and Don Graham (3162).

THE CORONADO SKI CLUB fields its Ski Fair V extravaganza in the Club pool and patio area on Tuesday evening, Sept. 21. Featured will be downhill and cross-country equipment and attire from most all Albuquerque ski shops, information on most of the regional ski areas (some will have reps on hand), and a potpourri of support groups such as airlines, Sandia Peak Ski Patrol and ski rental shops. The Ski Club will pitch planned trips and discuss membership advantages.

The show starts at 6 p.m. At 7:30 the action moves inside for a short business meeting followed by ski movies and the renowned Ski Club door prize drawings. Refreshments sell for 25 cents each.

Only Ski Club members are eligible for door prizes, but everyone is invited to the meeting.



STATE FAIR-BOUND is this display assembled by Sandia and Los Alamos members of the Rio Grande Chapter of the Health Physics Society. Visitors to the booth will be able to use a Geiger counter, as demonstrated by Bill O'Neal for Al Stanley and Gloria Millard (all 3313), to check the comparative radiation levels of several objects that are (or were) in common household use.

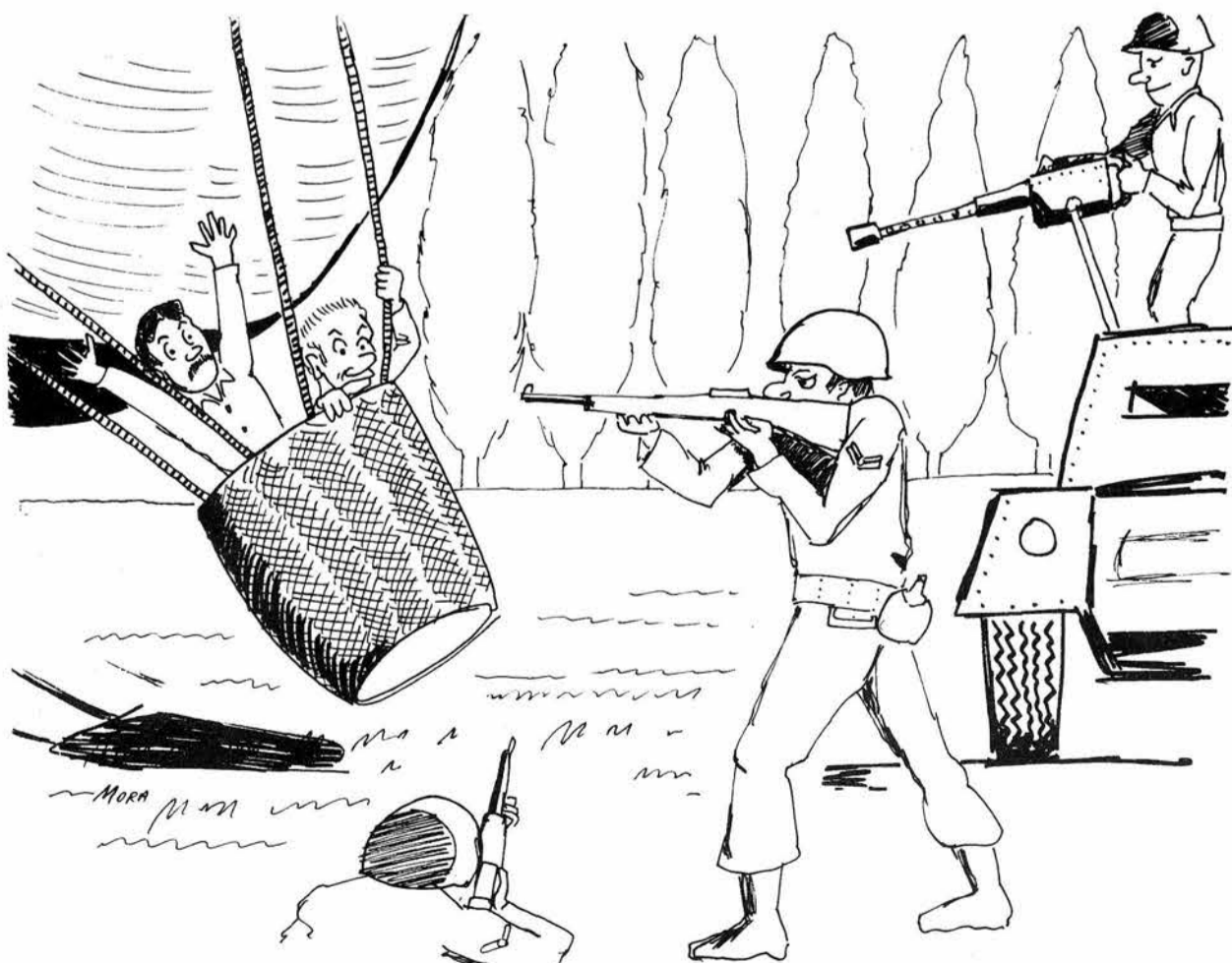
CORONADO GRANDSQUARES meet on Mondays for square dancing at 8:30. A class for dancers with some previous experience started this week and this group meets Mondays at 7 p.m. There are still openings in the class. Call Bob Butler (7233), 4-4880, for details.

SANDIA ORGANIZATIONS planning Christmas parties are urged to contact the Club office, 265-6791, before Sept. 30. Sandia groups get first option to use Club facilities during the upcoming holidays, then members may book private parties.

TRAVEL—The Club offers four travel packages to Las Vegas, Nev. Go by bus Nov. 25-28 for \$127 or on Dec. 26-29 for \$105. Go by air Nov. 26-28 for \$164 or Dec. 26-28 for \$138. The packages include lodging at the Maxim Hotel, transfers, and a tour of Hoover Dam.

Other Club trips include: *Cumbres & Toltec*, Sept. 26 and Oct. 2, \$42 adult, \$30 child; *Mexican Pacific Coast cruise*, Oct. 23-30, from \$789; *Canyon de Chelly*, Oct. 30-31, \$82; *Mazatlán*, Nov. 1-8 and Nov. 8-15, \$359; and *Dallas Cowboys*, Nov. 25-27, \$225.

Call the Club office, 265-6791, for more information.



"OK, freeze, you two. Even a Sandee-an knows you gotta have new vehicle stickers to get on Base."



PRIZE WINNER at the State Fair Contemporary Crafts show is Janda Panitz (1834). She's a process metallurgist on the job and uses the same skills in her crafts work. Two Tiffany-style pieces, a lamp and a utility box, were accepted for the juried show; the lamp won second prize. Both are etched copper over glass with a patina au feu finish. The Fair, the eighth largest in the country, runs through the 26th.